RESPONSES TO U.S. EPA & OEPA COMMENTS ON THE INTEGRATED ENVIRONMENTAL MONITORING STATUS REPORT FOR THIRD QUARTER 1998

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO

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U.S. DEPARTMENT OF ENERGY
FERNALD AREA OFFICE

RESPONSES TO U.S. EPA COMMENTS ON THE INTEGRATED ENVIRONMENTAL MONITORING STATUS REPORT FOR THIRD QUARTER 1998

Specific Comments

1. Commenting Organization: U.S. EPA Commentor: Saric
Section#: 1.2 Pg.#: 1-2 Line#: 42 Code:
Original Specific Comment# 1

Comment: The text refers to Figure 1-28 for a presentation of the total groundwater volume pumped versus the total groundwater volume treated. The draft Integrated Environmental Monitoring Plan (IEMP) dated October 1998 requires that the U.S. Department of Energy report the maximum, minimum, and average uranium concentration of groundwater sent for treatment during the previous quarter. This information should be provided in future quarterly reports. In addition, although not specifically required by the IEMP, future quarterly reports should also specify which extraction wells send groundwater to the treatment system and which wells directly discharge groundwater. This information should also include the maximum, minimum, and average uranium concentrations of groundwater sent for treatment or discharge from each extraction well.

Response: As agreed to with the U.S. Environmental Protection Agency (EPA), the sampling and reporting protocol outlined in the Draft Integrated Environmental Monitoring Plan (IEMP), Revision 1, became effective January 1, 1999; therefore, beginning with the Integrated Environmental Monitoring Status Report for First Quarter 1999 to be issued June 28, 1999, the minimum, maximum, and average total uranium concentration in groundwater sent to treatment will be provided.

The second portion of this comment pertains to which wells are sent to treatment versus which wells are sent to bypass. Treatment/bypass decisions are made based on review of the weekly total uranium results from each of the extraction wells. These results are currently provided in IEMP quarterly status reports. Treatment/bypass decisions are made on a well-by-well basis for the nine operating South Field (Phase 1) Extraction Module wells. However, treatment/bypass decisions for the six off-property South Plume/South Plume Optimization Module extraction wells must be made based on the total uranium concentration of the combined flow from the six wells (because flow from these wells is commingled in the off-property portion of the transfer line). Current treatment decisions are made in accordance with Section 5.4.3.1 of the Operations and Maintenance Master Plan for the Aquifer Restoration and Wastewater Treatment Project which states: "Treatment of groundwater well discharges will be prioritized in order of uranium concentration, with the highest uranium concentration wells routed to treatment until all available treatment capacity is utilized. Remaining well discharges will be bypassed around treatment to the Parshall Flume. The existing four South Plume off-property, leading-edge wells and the additional two wells installed in the South Plume Optimization Project will be routed as a group either for treatment, full bypass, or partial bypass since piping does not exist for well-by-well decision-making."

As described in the Operations and Maintenance Master Plan, the treatment capacity available to treat groundwater at the Fernald Environmental Management Project (FEMP) varies depending on the amount of storm water requiring treatment. In

general, what has been experienced since the new groundwater restoration wells came online last summer is as follows:

- All wells with total uranium concentrations higher than the combined South Plume/South Plume Optimization Module flow are sent to treatment. This currently includes seven of the nine operating South Field (Phase 1) Extraction Module wells.
- All wells with total uranium concentrations less than the South Plume/South Plume Optimization Module flow are sent to bypass which currently includes the remaining two operating South Field Extraction Module wells.
- A portion of the combined South Plume/South Plume Optimization Module flow is sent to treatment and a portion is sent to bypass. The proportions going either way vary frequently and automatically based on available treatment capacity.

Based on the above description of how the FEMP is making treatment/bypass routing decisions for extraction wells, the information requested by the reviewer can be derived from the information currently reported in IEMP quarterly status reports (i.e., extraction well total uranium concentrations).

Action: The IEMP, Revision 1, reporting requirements will be implemented beginning with the Integrated Environmental Monitoring Status Report for First Quarter 1999.

2. Commenting Organization: U.S. EPA Commentor: Saric
Section#: 3.2 Pg.#: 3-1 Line#: 28 through 30 Code:
Original Specific Comment# 2

Comment: The report states that "an increase in the quarterly average total uranium concentration was observed at nine of the 16 fenceline air particulate monitoring locations during the third quarter of 1998." However, data in Table 3-1 also show that year-to-date average uranium concentrations at the end of the third quarter increased at 13 of the 16 sampling locations, compared to year-to-date averages at the end of the second quarter. This comparison is a more meaningful indicator of uranium concentration trends because it considers all data collected in 1998 and not just data from the second and third quarters. Subsequent quarterly reports should include comparisons of year-to-date averages as well as quarterly averages of uranium concentrations.

Response: The U.S. Department of Energy (DOE) agrees with the comment.

Action: Future IEMP quarterly status reports will include comparisons of year-to-date total uranium concentration averages, as well as quarterly comparisons.

3. Commenting Organization: U.S. EPA Commentor: Saric
Section#: 3.2 Pg.#: 3-2 Line#: 34 through 40 Code:
Original Specific Comment# 3

Comment: The text states that a high radium-226 dose equivalent was observed at background monitoring location AMS-16 during the third quarter. However, Table 3-3 shows a year-to-date value of "0.0E+000" for radium-226 at location AMS-16. Either subsequent quarterly reports should be reviewed to eliminate discrepancies of this type or a footnote should be added to Table 3-3 to explain why measured radium-226 values are presented as zero.

Response: DOE recognizes that the explanation for not using the third quarter radium-226 data from AMS-16, because it was not considered representative of background radium-226 levels, may have lead to confusion in interpreting the data listed in Table 3-3. Therefore, DOE will identify radium-226 data at AMS-16 as not being representative

of the true background in the footnote of National Emissions Standards for Hazardous Air Pollutant (NESHAP) comparison table. In addition, if data are rejected, it will also be footnoted in the NESHAP compliance table beginning with the Integrated Environmental Monitoring Status Report for Fourth Quarter 1998 and subsequent IEMP quarterly status reports.

Action: DOE will include footnotes to NESHAP tables to indicate that third quarter radium-226 data from AMS-16 were not used in the dose calculation for trending NESHAP compliance because it was not representative of background radium-226 levels.

4. Commenting Organization: U.S. EPA Commentor: Saric
Section#: 3.2 Pg.#: 3-3 Line#: 11 through 19 Code:
Original Specific Comment# 4

Comment: Discussions of project-specific air monitoring results in the quarterly reports continues to be inadequate. This paragraph, which discusses air monitoring results from the decontamination and dismantlement of the Thorium/Plant 9 Complex, states that results at one project-specific air monitoring point exceeded "the established criteria" and that "additional engineering controls were implemented which extend beyond the project boundary." The language in the paragraph is nearly identical to language in the second quarter monitoring report, when a similar exceedance was observed and engineering controls were implemented. It appears that controls implemented during the second quarter were not completely effective because established criteria were again exceeded during the third quarter. This raises questions concerning the types of controls implemented during the second quarter and whether controls implemented in the third quarter are likely to be more effective. Subsequent quarterly monitoring reports should present a more complete discussion of project-specific air monitoring results and activities.

Response: Throughout the Plant 9 dismantlement project, the project-specific air monitoring results have been closely monitored in order to determine whether project emissions were influencing fenceline total uranium concentrations. However, due to the location of the Plant 9 complex within the former production area, the location of other remediation activities (i.e., on-site disposal facility, sewage treatment plant demolition, etc.) with respect to the fenceline monitors and the low average total uranium concentrations observed at the fenceline, it is extremely difficult, if not impossible, to isolate the fraction of fenceline total uranium concentrations which may be attributable to emissions from the Plant 9 project. The cumulative emissions from all remediation projects on site, as measured by the fenceline monitors, have resulted in a fenceline dose for 1998 that is less than three percent of the applicable dose limit. As a result, discussions of the Plant 9 project-specific monitoring results within IEMP quarterly status reports have recently been general in nature, even with exceedances of the project's administrative thresholds, and no discernable impact has been observed at the site fenceline from Plant 9 decontamination and dismantlement activities. It is important to note that DOE will provide detailed data and discussions of project-specific air monitoring results in the Thorium/Plant 9 Complex Above-Grade Decontamination and Dismantlement Project Completion Report which is due in April 1999. This completion report will include a discussion of the types and effectiveness of engineering controls which were implemented to control emissions during the life of the project. In addition, see Comment Response #5.

Action: No action required.

5. Commenting Organization: U.S. EPA Commentor: Saric
Section#: 3.2 Pg.#: 3-3 Line#: 21 through 33 Code:
Original Specific Comment# 5

Comment: This paragraph, which discusses air monitoring of the Sewage Treatment Plant (STP) Complex Decontamination and Dismantlement project, is another example of the need to expand the discussion of project-specific air monitoring results in the quarterly monitoring reports. The paragraph refers to a project-specific air monitor located between AMS-3 and AMS-29 along the eastern site fenceline. The paragraph also states that results for this monitor were "comparable to uranium concentrations measured at AMS-3." The location of the project-specific air monitor along the fenceline suggests that the STP project has the potential to cause an air impact at or beyond the fenceline that is not adequately monitored by either AMS-3 or AMS-29. Further, during the third quarter, the highest calculated dose equivalent occurred at location AMS-3. If results for the project-specific air monitor were similar to AMS-3 results as stated, data for this monitor should have been presented and additional discussion should have been included in the quarterly monitoring report. Subsequent quarterly monitoring reports should more completely discuss and present project-specific air monitoring results, especially when there is a potential impact at or beyond the site fenceline.

Response: DOE recognizes that because of its location on the site fenceline, fugitive emissions from the Sewage Treatment Plant Complex Above-Grade Decontamination and Dismantlement Project could cross the FEMP property boundary without being monitored by the IEMP fenceline monitoring network. This was the basis for including a project-specific air monitor within the project design. Because this project-specific monitor provides data which could be useful in assessing off-property impacts, DOE agrees that the information associated with this project-specific monitoring activity should be included, in detail, within IEMP reports. As such, the Integrated Environmental Monitoring Status Report for Fourth Quarter 1998 contains an expanded discussion and presentation of results from the project-specific air monitor at the Sewage Treatment Plant Complex. In the future, the decision to include detailed information on project-specific air monitoring activities within IEMP quarterly status and annual integrated site environmental reports will be based on the following criteria:

- Information that indicates an impact at or beyond the FEMP fenceline at a location not covered by the IEMP monitoring network
- Information that indicates the exceedance of an applicable or relevant and appropriate requirement at an on-site location (for example, the radon limit of 100 picoCuries per liter [pCi/L])
- Information that is relevant to explaining significant changes in the data from the IEMP air monitoring network.

Action: Future IEMP quarterly status and annual integrated site environmental reports will include sewage treatment plant (STP-1) data in appropriate tables and figures.

6. Commenting Organization: U.S. EPA Commentor: Saric
Section#: 3.2 Pg.#: 3-5 Line#: 3 Code:
Original Specific Comment# 6

Comment: Based on data presented in Table 3-5, the text should be revised to state that silo headspace radon concentrations are summarized "monthly" rather than "quarterly."

Response: The silo headspace data are presented in two ways in the report including a tabular presentation of monthly average concentrations (Table 3-5) and graphical presentation of quarterly average concentrations (Figure 3-11).

Action: To improve clarity between the text discussion and the tabular and graphical presentations, DOE will include a reference to the appropriate figure or table within the text in future IEMP quarterly status reports.

7. Commenting Organization: U.S. EPA Commentor: Saric
Section#: 3.2 Pg.#: 3-5 Line#: 9 through 12 Code:
Original Specific Comment# 7
Comment: The text states incorrectly that Silo 2 headspace radon concentrations during the third quarter of 1998 increased by 33 percent compared to the same period in 1997. However, data presented in Table 3-5 indicate that minimum daily averages increased by no more than 24 percent, maximum daily averages increased by no more than 14 percent, and monthly averages increased by no more than 22 percent. The text and table should be made consistent in future quarterly reports.
Response: DOE acknowledges the error pointed out by the reviewer.
Action: Text and tables will be reviewed to ensure consistency in future IEMP quarterly status reports.

8. Commenting Organization: U.S. EPA Commentor: Saric
Section#: 3.2 Pg.#: 3-5 Line#: 30 through 33 Code:
Original Specific Comment# 8
Comment: The text states that direct radiation measurements show a slight positive trend at the site fenceline near the K-65 silos and that Figure 3-13 shows the trend for location AMS-6. However, Figure 3-13 shows that concentrations at location AMS-6 have remained nearly constant and nearly identical to background concentrations between 1992 and 1998. Subsequent quarterly monitoring reports should either include revised text or present a revised figure that more clearly illustrates the slight positive trend at location AMS-6.
Response: DOE recognizes that the scale used in Figure 3-13 makes it difficult to identify the slight positive trend at AMS-6. In order to more clearly illustrate the upward trend, an additional figure will be added to future IEMP quarterly status reports to improve the graphical presentation of this trend.
Action: DOE will add a figure to better illustrate the upward trend in direct radiation measurements at AMS-6 (refer to Figure 3-15 in the Integrated Environmental Monitoring Status Report for Fourth Quarter 1998).

9. Commenting Organization: U.S. EPA Commentor: Saric
Table#: 3-7 Pg.#: 3-14 Line#: NA Code:
Original Specific Comment# 9
Comment: This table contains two apparent discrepancies between total particulate and individual radionuclide results. First, a thorium-230 result is included for the Building 71 Stack, but footnote c to the table states that total particulate concentrations for the Building 71 Stack "could not be determined due to a damaged filter." Second, individual radionuclide concentrations are presented for the T-Hopper Stack, but the total particulate concentration for this stack is listed as "0.0E+00." It should be noted that similar discrepancies have appeared in previous quarterly monitoring reports. Subsequent reports should more clearly state how radionuclide concentrations were determined when particulate matter either was not detected or could not be measured.
Response: Total particulate is determined by comparing the weights of a filter before and after use on a laboratory scale capable of measuring down to 0.001 gram. Occasionally, when a filter is being removed from the filter holder, small fragments from the edges of the filter that are in contact with the holder (not in the air flow) are lost due to "sticking"

to the filter holder gasket. The loss of these small fragments can produce total particulate results which are inaccurate or reflect negative values. Because the sample filter is located downstream of the HEPA unit, the amount of particulate is always very small, if measurable at all. Although this occurrence affects the total particulate concentration, it does not impact the radionuclide analysis because the lost filter fragments were not exposed to the air flow. Therefore, the NESHAP Stack Emission Monitoring Results table may indicate measurable amounts of uranium or thorium and non-detectable amounts of total particulate from the same sample location.

Action: All future tables will be footnoted to identify stack particulate emissions as "NA" (not available) rather than "0" when dealing with damaged or negative weight sample filters.

RESPONSES TO OEPA COMMENTS ON THE INTEGRATED ENVIRONMENTAL MONITORING STATUS REPORT FOR THIRD QUARTER 1998

10. Commenting Organization: OEPA Commentor: HSI GeoTrans, Inc.
Section#: 1.0 Pg.#: 1-1 Line#: 17 Code: E
Original Comment# 1

Comment: For consistency in the Draft Integrated Environmental Monitoring Plan dated October 1998, the combined South Plume and South Plume Optimization Modules should be referred to as simply the South Plume Module.

Response: The module names used in the Integrated Environmental Monitoring Status Report for Third Quarter 1998 are consistent with those module names used in the IEMP, Revision 0. The IEMP, Revision 0, is the controlling plan for the monitoring conducted from August 1997 through December 1998. The terminology provided in this plan is used in the reports to assist the reviewer. The Draft IEMP, Revision 1, is the controlling plan for monitoring to be conducted from January 1999 through December 2000. Therefore, beginning with the Integrated Environmental Monitoring Status Report for First Quarter 1999, terminology in IEMP quarterly status reports will reflect the IEMP, Revision 1.

Action: No action required.

11. Commenting Organization: OEPA Commentor: HSI GeoTrans, Inc.
Section#: 1.0 Pg.#: 1-6 Line#: 4 Code: C
Original Comment# 2

Comment: The text highlights the changes in the borescope results at Monitoring Well 21063, relative to second quarter, 1998. Why did 21063 show such a large change after the initiation of the pumping at the South Field Module but 22303 (which is closer to the pumping centers) showed very little change in comparison?

Response: There is no apparent reason why the change in flow direction with additional pumping would be more pronounced at Monitoring Well 21063 than at Monitoring Well 22303 which is closer to the pumping centers. The different responses at the two monitoring wells in question may be due to localized preferential flow zones in the aquifer in this area which are intersected by Monitoring Well 21063 but not by Monitoring Well 22303.

Action: DOE will continue to monitor groundwater flow directions at Monitoring Wells 21063 and 22303 and report results in future IEMP quarterly status reports.

12. Commenting Organization: OEPA Commentor: HSI GeoTrans, Inc.
Section#: 1.0 Pg.#: 1-6 Line#: 17 Code: C
Original Comment# 3

Comment: As discussed in the OU 5 RI Report, the reach of Paddy's Run near Monitoring Well 2551 is variably gaining or losing depending the relationship between the streambed and the adjacent water table. Although the precipitation data presented in the report lacks the resolution for determination of antecedent rainfall conditions for the boroscope measurement dates for the data presented in this report and in the 2Q98 report, somewhat dry conditions likely existed because of the generally eastward flow directions observed from the boroscope. A westward groundwater flow direction, however, likely exists at the well during storm events. The concern is the relative duration of this condition and its potential for pushing contamination west of the predicted capture zone. The investigations at this well should address this issue.

Response: As discussed in responses to previous comments about the total uranium plume at Monitoring Well 2551, DOE continues to measure the flow directions at this well with the borescope and will continue to present those measurements in future IEMP quarterly status reports. DOE does not believe that contamination can move westward from Paddys Run against regional groundwater flow to form a contaminant plume west of Paddys Run in the vicinity of Monitoring Well 2551. Any westward surge of groundwater which might occur from a transient recharge event associated with Paddys Run would very quickly be reversed by regional groundwater flow to the east and southeast as soon as the recharge event was over. For additional discussion, refer to Responses to U.S. EPA and OEPA Comments on the Draft Integrated Environmental Monitoring Status Report for Third Quarter 1997, Comment Response #23, Responses to U.S. EPA and OEPA Comments on the Integrated Environmental Monitoring Status Report for First Quarter 1998, Comment Response #11, and Responses to OEPA Comments on the Integrated Environmental Monitoring Status Report for Second Quarter 1998, Comment Response #4.

Action: DOE will continue to monitor and report groundwater flow directions at Monitoring Well 2551.

13. Commenting Organization: OEPA Commentor: HSI GeoTrans, Inc.
Section#: 1.0 Pg.#: 1-10 Line#: 14 Code: C
Original Comment# 4

Comment: The text indicates that 17 samples were collected from the horizontal till well during the four-month period from July through October. As indicated in previously submitted comments (e.g., 2Q98 IEMP Report and Technical Memorandum for the On-Site Disposal Facility Cell 1 Baseline Groundwater Conditions), a monthly sampling frequency is recommended by the US EPA for wells constructed in till. More frequent sampling will likely result in the collection of non independent samples.

Response: The On-Site Disposal Facility Groundwater/Leak Detection and Leachate Monitoring Plan generally envisioned a monthly sampling frequency for baseline monitoring in order to evaluate seasonal variation; however, the plan acknowledges the potential for accelerating this schedule, as necessary, to accommodate construction and waste placement activities. As identified in the Technical Memorandum for the On-Site Disposal Facility Cell 1 Baseline Groundwater Conditions, unlike the Great Miami Aquifer wells which lie outside the on-site disposal facility footprint and can be installed independently of the facility's construction, the perched water well is an integral part of the construction of each cell of the on-site disposal facility. The sequence of construction activities includes the installation of the perched water well prior to the construction of the secondary liner system. It was necessary to accelerate pre-waste placement baseline sampling of the horizontal till wells associated with Cells 1 and 2. However, DOE will make every attempt in the future to collect baseline samples from the horizontal till wells on a monthly basis. It is anticipated that baseline samples from the Cell 3 horizontal till well will be collected monthly.

Action: DOE will make every attempt in the future to collect baseline samples from the horizontal till wells on a monthly basis.

14. Commenting Organization: OEPA Commentor: HSI GeoTrans, Inc.
Section#: 1.0 Pg.#: Fig. 1-1 Line#: NA Code: C
Original Comment# 5

Comment: The entries under the column entitled "Sampling Activities" are ambiguous with respect to whether or not groundwater concentration data will be provided for the given activity. For example, the term "Aquifer Conditions" is used for both the

South Plume/South Plume Optimization Modules and the South Field Extraction Module while similar information is provided for other well groups that do not include this term (e.g., RCRA Property Boundary wells).

Response: In order to assist the reviewers, the terms "aquifer conditions" and "operational" were included in this figure to better define and differentiate the data associated with the aquifer restoration modules. Operational data from aquifer restoration wells are used to status the efficiency of the remediation process and consist of: pumping/re-injection rates; total uranium concentrations of groundwater pumped; well efficiencies; discharge concentrations; gallons of groundwater pumped/re-injected, etc. Aquifer condition data are collected to evaluate the quality of the aquifer and the effectiveness of the remediation process. Aquifer condition data consist of total uranium and non-uranium final remediation level (FRL) constituent concentrations, water levels, and flow directions. Concentration data are interpreted on an area by area basis, whereas water level and flow direction data are interpreted across the entire monitoring program area. For Figure 1-1, aquifer condition data are either subgrouped under a restoration module or identified using a subheading that assigns them to the IEMP identified sampling area from where the data are being collected (e.g., RCRA Property Boundary Monitoring, Private Well Monitoring, or KC-2 Warehouse Monitoring). Because routine water level and flow direction monitoring data are interpreted across the entire monitoring area, they are organized in the IEMP as a separate activity and are identified in Figure 1-1 with a unique subheading.

Action: No action required.

15. Commenting Organization: Ohio EPA Commentor: DSW
Section#: Table 2-1 Pg.#: 2-5 Line#: NA Code: E
Original Comment# 6

Comment: The superscript "C" on the 13 under "Cumulative Number of Bypass Days" has no footnote. The footnote "C" appears to refer to the superscript "C" on the 1.99 under "Total Uranium Discharged (pounds)."

Response: DOE agrees that footnote "c" refers to the 1.99 in the column titled "Total Uranium Discharged." The 13 in the column titled "Cumulative Number of Bypass Days" should not have had a footnote.

Action: No action required.

16. Commenting Organization: Ohio EPA Commentor: DSW
Section#: 2.2 Pg.#: 2-1 Line#: 33-42 Code: C
Original Comment# 7

Comment: No reason is given for the total suspended solids exceedences at the effluent of the sewage treatment plant. Information of investigation of causes and actions to prevent future exceedences should be included. If the exceedence at the 4601 did not cause any exceedence of total suspended solids at the final monitoring station, 4001, it may be to your benefit to so state. Otherwise, readers not familiar with the system may conclude that an exceedence of total suspended solids from the sewage treatment facility was discharged directly to the Great Miami River.

Response: Detailed information pertaining to causes of any National Pollutant Discharge Elimination System (NPDES) noncompliance and actions to prevent recurrence are provided in the monthly noncompliance reports submitted for NPDES. In future IEMP quarterly status reports, summary-level information pertaining to the cause(s) of an NPDES noncompliance and those actions taken to mitigate a noncompliance will be provided. DOE also agrees that it would be beneficial to identify that STP 4601 does

not directly affect the Great Miami River because it is a monitoring point internal to the discharge system.

Action: Future IEMP quarterly status reports will contain summary-level information pertaining to the cause(s) of an NPDES noncompliance and those actions taken to mitigate a noncompliance. In addition, sample location STP 4601 will be identified as an internal monitoring point in future IEMP quarterly status reports to provide clarification that exceedances from this location do not directly affect the Great Miami River.

17. Commenting Organization: Ohio EPA Commentor: DSW
Section#: 2.2 Pg.#: 2-3 Line#: 28-47 Code: C
Original Comment# 8

Comment: Additional measures were taken to reduce the number of bypass events. These were outlined in a meeting on October 13, 1998 and include keeping the SWRB at a lower static level, change in pumping of the K65 concrete basin, and the diversion of the storm water from cells two and three. All of these corrective actions that were taken to improve surface water handling and treatment should be listed.

Response: DOE agrees with the comment; however, these discussions occurred in the fourth quarter of 1998 and, therefore, will be reported in the Integrated Environmental Monitoring Status Report for Fourth Quarter 1998. Corrective actions that have resulted from discussions with OEPA and EPA will also be documented in the Operations and Maintenance Master Plan for the Aquifer Restoration and Wastewater Treatment Project to be issued in the spring of 1999. In addition any actions instituted to reduce the number of bypass and overflow event days will be discussed in future IEMP quarterly status reports as they occur.

Action: Any actions taken to mitigate Storm Water Retention Basin bypasses and overflows will be identified in future IEMP quarterly status reports.

18. Commenting Organization: Ohio EPA Commentor: DSW
Section#: SW Data Pg.#: NA Line#: 225-240 Code: C
Original Comment# 9

Comment: There is not total uranium data for SWD-01. Total uranium was going to be added to the parameter list for this sampling location.

Response: The IEMP, Revision 0, is the controlling plan for the monitoring conducted from August 1997 through December 1998 and does not require total uranium to be monitored at sample location SWD-01. Therefore, the Integrated Environmental Monitoring Status Report for Third Quarter 1998 includes data collected under IEMP, Revision 0, and does not include total uranium results from sample location SWD-01. The Draft IEMP, Revision 1, is the controlling plan for monitoring to be conducted from January 1999 through December 2000, which does require total uranium sampling at this location. Therefore, beginning with the Integrated Environmental Monitoring Status Report for First Quarter 1999, total uranium data will be included for SWD-01.

Action: No action required.

19. Commenting Organization: Ohio EPA Commentor: DSW
Section#: SW Data Pg.#: NA Line#: NA Code: C
Original Comment# 10

Comment: The reporting of the surface water data is still confusing. Sampling frequency, reporting time frames and parameters reported are not clear. For example the following was noted with respect to the sampling location at the Storm Water Retention

Basin: 1) There are different sample dates. The NPDES and FFCA samples were taken in July and the IEMP samples were taken in April. Why is there such a time lag with the IEMP data reporting? The lag time is noticed when comparing the IEMP data to the NPDES and FFCA data. In the second quarter data package, the April NPDES and FFCA data was reported. Why wasn't the IEMP results from April sampling also reported in that package rather than this package?
2) The data shows multiple samples on the same date for the same parameter with different results, but the additional samples are not listed as duplicates under the "QA type" column (e.g., three cadmium samples taken on 4/16/98). Why are there multiple samples taken? Please clarify.
3) the parameters reported do not match the parameters listed in Table 4-12 of the IEMP or the NPDES permit. For example, total suspended solids, oil and grease, and flow rates do not show up in the NPDES data.
4) The permit and Table 4-12 state that daily samples must be taken and it appears from the second quarter FFCA data that overflow occurred on 4/16, 4/17, 4/18, and 4/19 but sampling was only reported for 4/16 in the third quarter NPDES data.
5) Table 4-3 in the IEMP shows aluminum to be sampled along with other parameters at each overflow event but aluminum does not show up in the surface water data for 4/16.

Response:

1) In general, samples collected in support of Federal Facilities Compliance Agreement (FFCA) and NPDES programs are analyzed by the on-site laboratory, while samples collected in support of IEMP Characterization are analyzed by an off-site laboratory due to the complexities of the required analyses, low detection limit requirements, and increased laboratory capacities. Because there is less complexity associated with most of the constituents being analyzed for NPDES and FFCA, the current IEMP reporting schedule allows the available NPDES and FFCA data to be reported prior to the IEMP Characterization data. Previous comment responses have identified that DOE is continuing to evaluate ways to streamline the analytical and data management processes to support more timely reporting. (Refer to Responses to U.S. EPA and OEPA Comments on the Integrated Environmental Monitoring Status Report for First Quarter 1998, Comment Response #15 and Responses to U.S. EPA and OEPA Comments on the Draft Integrated Environmental Monitoring Plan [Revision1], Comment Response #35). However, with the current constraints of laboratory turn-around times, resolution of analytical issues with the off-site laboratories, and the limited number of data management resources available to handle the large volume of data generated at the FEMP, it is doubtful that significant improvements can be realized in the near future.
2) One of the three samples should have been identified as a duplicate; the third set of analytical data is a result of the off-site laboratory analyzing the sample and reporting results for more constituents than were originally requested. All the analytical data were used in the final data evaluation.
3) Only data pertaining to FRLs and/or benchmark toxicity values (BTVs) are submitted with IEMP quarterly status reports. Monthly NPDES discharge reports, submitted under separate cover, contain all data collected for the NPDES permit.
4) As noted in Table 2-1 of the Integrated Environmental Monitoring Status Report for Third Quarter 1998, an overflow occurred on April 16, 1998, that lasted for 15.9 hours. Data on the data disk and within the report associated with the overflow are designated as 4002O and samples collected for the bypass are associated with 4002B. Samples were collected during this overflow and the data associated with this overflow are provided on the data

disk. Table 2-1 also identifies that treatment bypassing occurred on April 16 through April 19, 1998, and the data associated with bypassing are provided on the data disk.

5) Aluminum was included under the IEMP, Revision 0, surface water sampling program to ascertain whether there were any sporadic aluminum BTV exceedances in site drainages. However, as identified in Section 2 of the Integrated Environmental Monitoring Status Report for Second Quarter 1998, continued evaluation of BTV constituents would focus on barium, cadmium, and silver that were identified through the BTV screening process presented in the Sitewide Excavation Plan. Therefore, aluminum data were not provided on the data disk as it is no longer being evaluated.

Action: No action required.

20. Commenting Organization: Ohio EPA Commentor: DSW
Section#: 3.2 Pg.#: 3-2 thru 3-3 Line#: NA Code: C
Original Comment# 11

Comment: The project specific monitors for Thorium/Plant 9 Complex and the Sewage Treatment Plant Complex should be included in figures (Figure 3-2) denoting location and the collected data (Table 3-1).

Response: See Comment Responses #4 and #5. Because project-specific monitor STP-1 is located at the facility fenceline and provides an indication of fugitive emissions leaving the site, it will be added to Figure 3-2 which shows radiological air particulate monitoring locations. Additionally, data from STP-1 will be summarized within IEMP quarterly status reports. This is consistent with the reporting approach presented in previous comment response documents (refer to Responses to U.S. EPA and OEPA Comments on the Draft Integrated Environmental Monitoring Plan [Revision 1], Comment Response #6).

Project-specific monitoring for the Thorium/Plant 9 Complex was completed on February 5, 1999, following the completion of decontamination and dismantling activities on February 4, 1999. Data from this project-specific monitoring activity will be included in the Thorium/Plant 9 Complex Project completion report.

Action: The project-specific monitor, STP-1, located at the Sewage Treatment Plant Complex will be included in the figure which depicts radiological air particulate monitoring locations and data will be summarized within future IEMP quarterly status reports.

21. Commenting Organization: Ohio EPA Commentor: DSW
Section#: Table 3-1 Pg.#: 3-7 Line#: NA Code: C
Original Comment# 12

Comment: The concentrations recorded at AMS-3 are significantly higher than any of the other samplers most probably due to activities in the Sewage Treatment Plant Complex. Additional data from existing project-specific samplers should be included and evaluated to demonstrate DOE commitment to keeping contamination ALARA.

Response: See Comment Responses #5 and #20.

Action: See Actions #5 and #20.